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10/650,291

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James H. Keithly

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CHICAGO, IL 60606

EXAMINER

PRATT, HELEN F

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,291

Applicant(s)

KEITHLY ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21,23-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21,23-26 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21, 23-26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonaventura et al. in view of "Citrus Industry", June 99, and Pao et al. and further in view of Atkins et al. (3,917,867) and Chenchin et al. (6,007,863) and Horticultural Field Day, St. Cloud, Florida (Castle) and Gmitter (Florida Agricultural Experiment Station Journal Series No. N-01137).

Bonaventura et al. disclose a product containing orange juice made by combining juices made from early, middle or late season fruit. Various sensory characteristics were evaluated depending on the fruit blend and sources used (abstract). Claim 1 differs from the reference in the use of particular cultivars and in using oranges from various seasons in which the fruit have peak properties with particular Brix acid ratios compared to other harvesting times. However, it is seen that it is known to blend juices from the various parts of the growing season. Certainly, it would have been within the skill of the ordinary worker to choose a particular cultivar, which exhibits various characteristics such as sweetness and brix and acidity to blend with other juices. Citrus Growers disclose that the Hamlin orange is the standard for comparison for juice

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quality factors including color, yield and time of maturity (page 25, middle column). The reference also discloses that it would be helpful to have cultivars that mature ahead of the Hamlin orange with a 36 color score in Nov. or an orange that had good color in February and brix ratio (page 24, 1st col.). Pao disclose that the flavor quality of early season Hamlin oranges and grapefruit juices could be improved by blending with juices of many available variations (abstract). Atkins et al. disclose that it is known to blend early and mid-season cultivars with the Valencia orange juice (abstract and col. 9, lines 22-35). Chenchin et al. disclose that it is known to blend juices from various seasons to achieve a particular Brix acid ratio (abstract and col. 6, lines 20-64, col. 10, lines 15-30). Castle discloses that it is known to test various cultivars to determine various characteristics such as soluble solids, (page 7), color and flavor (page 9 and 12). The Declaration of William Castle states that one of the purposes of the early Florida citrus grower Orie Lee and himself was to locate and identify early-maturing cultivars whose juice color and other chemical properties would make them suitable for early season harvesting and use in orange juice products (page 2, para. 3). Also, Gmitter discloses that it is known to test orange cultivars for particular characteristics and that trees are selected for producing juice quality and maturity season in plant breeding (page 165). Therefore, it would have been obvious to test juices from various cultivars to determine various characteristics important to an acceptable juice and to blend juices from particular cultivars to make a product with particular sensory characteristics.

Claim 1 further requires that the mid-season time period is after the peak harvesting season for earlier season round orange fruit and before the season for late

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season oranges and that this juice is blended with juices not harvested during the mid season period. However, nothing new is seen in harvesting oranges at their peak as nothing is to be gained from harvesting oranges which are not. As the above references disclose, it is known to blend juices from various seasons to make a more desirable product. Therefore, it would have been obvious to harvest oranges during their peak season in order to obtain particular peak juice characteristics.

Claims 2-4 further require that the harvesting occur at particular seasons. However, the reference to Bonaventura et al. disclose that it is known to use fruits from early, middle and late seasons and to blend the juices together. Certainly, if one can harvest at particular time in one season, then one could harvest at other times of the year, knowing the particular characteristics of the juices. The further use of sensory scores from various cultivars is also seen as within the skill of the ordinary worker as in claim 6, and particular sources having green characters of a particular amount as in claim 7, bitterness as in claim 8 and sensory feeling as in claim 9, sourness as in claim 10, and other characteristics as in claim 11. The whole process of blending requires that various characteristics of the oranges are taken into consideration. The same is true for claims 12-20, 22. Therefore, it would have been within the skill of the ordinary worker to use various characteristics of the oranges produced at the same time for their known functions in blending of juices.

Claim 3 further requires that the earlier season juice harvested during the mid-season is the other orange juice source as in claim 21. However, as above, this has been shown by Bonadventura et al., who blends juices from various seasons.

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Therefore, it would have been obvious to blend juices as claimed according to the various juice characteristics required.

Claims 1, 5-15 further require that the Valencia, and pineapple cultivars NFC juice is harvested during said mid-season time period. However, the references in combination as cited for claim 1 show that it is known to blend juices from various seasons and it is known to test juices to determine particular characteristics and to blend on this basis. Therefore, it would have been obvious to do so with the claimed cultivars and to make a juice based on their characteristics which have been improved by using fresh juices from cultivars of the mid-season.

The particular amounts of juice are seen as within the skill of the ordinary worker as the reference because juice products with such are well known as in claim 5. Therefore, it would have been obvious to use various amounts of juices to make a particular composition.

The limitations of claims 23-25, 27 have been discussed above and are obvious for those reasons.

Claims 16, 21 and 26 further requires a particular color number. However, this is a well known color number cited as preferable by Citrus Growers, and that it would be helpful to have cultivars that mature ahead of the Hamlin orange with a 36 color score in Nov. Bonaventura et al. disclose that it is known to use mid season fruit and to blend it with other juices from the two other growing seasons (page 284, 3rd col. 1st complete para.). Therefore, it would have been obvious to blend juices from the various seasons and to use a particular color score to make the required product.

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Claims 21, 26, and 3-15 are now product by process claims. The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796.

Claims 28-30 require particular characteristics of the juice and juices in particular amounts produced at various times. However, it is seen that as the characteristics of the juices are well known and can be determined by various tests, it would have been obvious to use juices with particular characteristics and in various amounts and to use particular cultivars for their known function of making particular juices.

Claim 31 further requires that the NFC orange juice have a quality sensory score greater than those of particular orange juice cultivars. However, as it is known that the cited fruit are not at their peak during the mid-season time period, it would have been obvious to mix in other juices that would have made a more acceptable product as disclosed by the combination of references for claim 1.

The further new limitations have been disclosed above and are obvious for those reasons.

It is noted that applicant's Terminal Disclaimer has been filed in the application 09/583,334 of which the present application is a continuation.

ARGUMENTS

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Applicant's arguments filed 10-17-06 have been fully considered but they are not persuasive. Applicants argue that it has been previously established during the prosecution of the invention that it is known in the art that "not-from-concentrate" (NFC) juices are pasteurized juices. This is seen as an attempt to insert information into the record that is not in the specification. It is not agreed that the NFC juices of the instant application are pasteurized juices.

Applicants argue that the references do not show the particular claimed cultivars such as Vernia and /or Frost juices being used to fill the gaps from oranges providing lower quality juice during the mid-season and refer to Fig. 1 of the application. However, the references do show in combination that it is known to combine juices from various seasons, and to determine the particular characteristics of orange juices and to blend such. Applicants have chosen particular cultivars, which they think give the best results. However, all of the technology is known, and it would have been obvious to use any cultivars, which have the required characteristics to blend with juices of lower quality.

Applicants argue that the references provide no teachings concerning sensory qualities as claimed and the references cannot be used to predict sensory qualities. However, applicants' claim 1 is to using particular cultivars from a mid-season and blending the juice with other cultivars. Applicant is picking and choosing particular juices to blend which is known as shown by the references.

Applicants argue that the combination of references do not suggest that Vernia or Frost juices would provide blended juices having superior sensory qualities when

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pasteurized into NFC juices. However, **no claims have been made to a pasteurized juice nor is there basis for such in the specification.**

Applicants argue that one cannot predict characteristics of commercial juices from fresh juices. However, no particular process limitations are seen to make the claimed juices any more commercial than that of the references, except in claiming particular cultivars. Certainly, the growers and writers of the references are well aware that their juices will be processed into commercial fruit juice as that is the major use of orange juice. Claiming particular cultivars is seen as being within the skill of the ordinary worker, as it is well known as shown by the references to test various juices for particular sensory characteristics. For instance, St. Cloud shows in table three the % of juice from particular orange cultivars, soluble solids, and color number,. Experiments were performed with the objective of identifying superior sweet orange cultivars regarding yield, soluble solids, and juice color (page 9). The reference to Gmitter discloses that various new citrus cultivars have been released to meet the demand for processed or fresh Florida citrus products (page 165, 1st para.). The reference recognizes the need to blend high and low colored juice to produce NFC juice (page 166, 1st para). In fact, 40 or more cultivars were evaluated in order to identify orange cultivars that produce early-maturing fruit with good quality and color and some meet the minimum juice color score of 36 in early season or exceed it (page 167, 2nd para.) Various juice characteristics are shown in Table 2.

Even though, the applicants argue that the characteristics of various juices are unpredictable in various oranges, the prior art routinely tests orange juice in order to

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know what the color, acidity, and soluble solids are of an orange juice. Certainly, there would have been no point in such testing if the results were not used in blending juices. Applicants have not claimed that they have discovered the claimed cultivars, but that the juice from the claimed cultivars makes an acceptable NFC juice and have also done routine testing in order to determine which cultivars produce an acceptable NFC fruit juice.

Applicants argue that until products are made up, one would not be able to predict which cultivars would possess particular sensory quality scores when pasteurized and processed into NFC juice when other cultivars such as blood orange or Ambersweet were not suitable. As above and in all the following arguments, APPLICANTS DO NOT HAVE A CLAIM TO PASTEURIZED JUICE. THERE IS NOTHING IN THE SPECIFICATION OR CLAIMS TO SAY THAT THE JUICES ARE PASTEURIZED. Applicants may say that this is the state of the art now, but it does not mean that it was when the application was filed. At any rate, these statements show that applicants are blending various juices just as was done in the prior art.

Applicants argue that a problem was solved in the NFC industry in that the mid-season time period had been a gap when the oranges did not produce adequate sensory characteristics when compared to the Hamlin or Valencia oranges which has not been recognized in the art. However, as above, it is known to mix orange juices to achieve particular sensory characteristics. Any time juice does not meet particular sensory characteristics is a time when other juices were blended. Certainly, a "gap" in quality does not need to be recognized if juices are routinely blended, which fills in any

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gap in the sensory profile of the juice. If there is a gap in mid-season juice flavor profiles, then the juice would have routinely been mixed with juices that would have improved the flavor profile. Here, applicants have identified particular cultivars which will produce juice with high enough sensory characteristics which are grown in a particular mid season, to blend with an inferior juice, which is what is known in the art. Certainly, the juices which are blended in general with other juices are also grown in particular seasons. For instance, the Valencia cultivar is grown in the late season and is considered a very good juice and it is bended with other juices from other seasons. The reason it is known to be a good juice is that it has been tested for various sensory characteristics, just as the claimed juices were tested, and then the trees grown for their particular juice.

Applicants argue as to Bonaventura et al. do not teach specifically NFC mid-season juices or their production or the use of Vernia or Frost cultivars, or pasteurized juices or incorporating Vernia or Frost juices into NFC juices. However, it is used in combination with other references. Bonaventura et al. disclose a product containing orange juice made by combining juices made from early, middle or late season fruit. It is not seen how applicants can say that there is no teaching of NFC mid-season juices when the reference specifically uses mid-season varieties (abstract). Applicant does not have a NFC pasteurized juice either. Bonaventura then also make a NFC juice which as in the claims is only a juice which is not pasteurized but is fresh juice. Various sensory characteristics were evaluated depending on the fruit blend and sources used (page 284, col. 3, para. A and B.).

Applicants argue further that since Bonaventura teaches only refrigerated juice which has not been pasteurized, that it cannot be NFC juices. However, as above, no basis is seen in the specification or claims that the juice has to be pasteurized to be a NFC juice. As to the use of particular cultivars in Bonaventura, the reference is not used to show such, but that it was known to mix oranges from various seasons (col. 3, 1st complete para., page 284).

Applicants argue that concerning the blending of juices, Bonaventura reports blends from fresh juice and juice from fruit from packing houses, not different cultivars from the same seasons. However, the principle is the same, of blending juices to produce a more acceptable juice. In Bonaventura, "a mixture of orange cultivars, according to the hypothetically foreseen availability of the fruit in the period with fruits coming directly from trees", with juice from the packing house (col. 3, page 284). Here, fruit from trees and available fruit connotes fruit being used which is in season, therefore, suitable for NFC juice. It is not seen that Bonaventura teaches different sources of the same cultivar, because three different varieties are used (page 284, 2nd col. Last para.). They tested a mixture of juice with different stages of ripeness and juice from oranges available during the season (col. 3, 1st incomplete para.).

Applicants argue that the reference to Gmitter does not predict why the cultivars Vernia or Frost would have superior sensory qualities to early and late cultivars of the same period. However, this reference is used in combination with other references. Citrus Industry discloses that the cultivar Vernia is known, and was shown to be comparable to Hughes, but has a much earlier maturity with excellent juice color and

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flavor. This gives the suggestion that it was known that Vernia was a cultivar that matures early in the season and has excellent sensory characteristics. (page 28, 1st col. under Vernia SC and Table 6). Certainly, if the cultivar, is known and has the required characteristics it would have been obvious to use it in making an orange juice as that is the whole function of growing trees to produce oranges. In addition, even if particular cultivars are known, it is still routine, to test various cultivars to decide which juice is suitable to use. That is exactly how applicants found out that particular cultivars were better than other.

Applicants argue that the Examiner's position does not predict that Vernia or Frost would have superior sensory qualities. However, this type of prediction is routinely made as shown by the art, which discloses that it is known to blend various juices. One could go on forever in claiming particular cultivars, but applicants have not invented Vernia or Frost, but have chosen those cultivars due to particular characteristics, all of which are known in the art.

Applicants argue as to Moore that the references do not show the claimed specific sensory qualities. However they do show the amount of acidity, which is relevant to the green character, and bitterness and sourness characteristics. Soluble solids affect other sensory characteristics and the sweetness characteristics. All these characteristics are found in the combined references. Applicants' specification also shows examples which use characteristics such as Brix, acid, bar and color (Examples). Again, no pasteurization is seen in the claims or specification, or NFC processing activities. Instead as in claim 21, a juice is made by harvesting, extracting,

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collecting and blending. No further processing parameters are seen except for those in the claims, such as heating, or filtering.

Applicants argue that they claim particular sensory characteristics as in claims 6-15. This is nothing more than making a juice by blending various juices, then determining by testing various levels of different sensory characteristics and claiming such. No invention is seen here.

As to Castle '99 in particular, applicants argue that this reference does not show the invention. However, as above, it does show that the cultivar Vernia, which has early maturity with excellent juice color and flavor (page 28).

Applicant argue that Castle '99 (Citrus Industry) does not teach that it has overall quality sensory scores greater than the other known juices. However, applicant is testing this cultivar, a known activity, and blending which is known.

Applicants argue that they have a novel chemical composition. This is not seen. Applicants are claiming mixing juices from particular cultivars. No particular chemical compounds are claimed.

Applicants argue that it is novel to use mid-season NFC and other NFC juices to fill the gap. This is not seen since testing for sensory characteristic and blending of juices is well known, and applicants have tested juices produced at this time for the same function as in other seasons to find an appropriate blend of juices.

Applicants argue as to the Declaration of William Castle that recognition of early maturing cultivars sensory properties does not address problems of mid-season NFC gap, particularly during pasteurization and commercial conditions. However, it does

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show that testing for sensory properties of various cultivars is known, i. e. color, and chemical properties. If it is known to identify early maturing cultivars making them suitable for early season juice products, and thereby filling a "gap" there, it would have been obvious to do the same for other "gaps" in the season. Assessments were made of juice flavor and juice traits which were continued throughout the year, and commercial type evaluations were also made (page 2). Also, the declaration discloses that the practice of mixing juices to provide other benefits such as color is known, and the practice of choosing different rootstocks upon juice quality is known. (page 3, 1st para.).

As to the further references, applicants use the same arguments that their cultivars are not shown nor is the need to fill the NFC gap during the mid season shown, or that the juice selected would stand up to commercial extraction and pasteurization and there is no expectation that various cultivars produce what is claimed or a reasonable expectation of success, or unexpected results or long time need. However, the same answer applies that the Examiner has been stating as above, that it is known to blend juices, that it is known to test juices to determine particular characteristics, and that knowing that these particular cultivars produce outstanding characteristics, it would have been obvious to use those trees, just as other fruit trees are grown at particular times to produce particular fruit with particular sensory characteristics.

The articles to Lafuente et al. '597 and Pao et al. and further articles are used for what they teach as was cited in the office action.

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The fact that it would have been obvious to try in testing various cultivars, is shown by an art as in juices in which the juices are routinely tested. Applicants' specification even uses the same parameters as those found in the art.

Applicants argue that until the present invention, that using NFC juice from cultivars extracted in the mid-season 'gap' was not fulfilled in the industry. However, as above, using blending various juices was known and that is what applicant is doing. Bonaventura, specifically cites bending midseason juices.

Applicants argue that they have invention in choosing particular cultivars. This is not seen, as above. It is routine to test oranges for particular characteristics and to blend the juices.

Applicants argue that there is no reasonable expectation that juice from cultivars will yield a good product. This is not seen for the reasons cited above.

Applicants argue that when technology is unpredictable it is less likely that similar species will render a claimed species obvious. Here the technology is predictable. Testing cultivars to arrive at particular characteristics is known, blending juices is known, certainly taste testing is known.

As to lack of success and meeting a long felt need, applicants have done no more than is known in the art as shown above.

Applicants argue that the particular cultivars have not been shown or the claimed properties which cannot be assumed. As said above, testing for sensory qualities is known, the claimed cultivars are known, blending is known. Applicants have blended

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juices to make an acceptable product, then tested it for various characteristics and claimed them. No invention is seen here.

It is not seen that the combined references do not teach any solution to the mid-season NFC gap problem for the reasons cited above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 571-272-1404. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hp 11-27-06


HELEN PRATT
PRIMARY EXAMINER